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MRO 11.19.99

To the Hon. Commissioner of Patents & Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):
 Masato SAKAMOTO, Katsunori TAMAMURA, Kazuhiko OOGAMI, Norikazu TADA, Atsushi KUSAKA, Akihito FUJIWARA and Mayumi TAKAHASHI

Additional name(s) of conveying party(ies) attached? Yes No

3. Nature of conveyance:
 Assignment Merger
 Security Agreement Change of Name
 Other

Execution Dates: November 12, 1999

2. Name and address of receiving party(ies):

Name:
 PIONEER CORPORATION
 and
 TOHOKU PIONEER CORPORATION

Street Address:
 No. 4-1 Meguro 1-chome, Meguro-ku, Tokyo-to, Japan
 and
 1105, Aza-Nikko, Oaza-Kunomoto, Tendo-shi, Yamagata-ken, Japan

JC675 U.S. PTO
09/444571
11/19/99

4. Application number(s) or patent (numbers):
 If this document is being filed together with a new application, the execution dates of the application is: November 12, 1999

A. Patent Application No(s).

B. Patent No(s). *09/444571*

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

YOUNG & THOMPSON
 Second Floor
 745 South 23rd Street
 Arlington, VA 22202

6. Total number of applications and patents involved:
 1

7. Total fee (37 CFR 3.41).....\$ 40
 Enclosed
 Authorized to be charged to deposit account

8. Deposit Account No. 25-0120
 (Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Mary Shelton *Mary Shelton* November 19, 1999
 Name of Person Signing Signature Date

Total number of pages including cover sheet: **[2]**

A S S I G N M E N T

FOR ONE DOLLAR (\$1.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I (We), Masato SAKAMOTO, Katsunori TAMAMURA, Kazuhiko OOGAMI, Norikazu TADA, Atsushi KUSAKA, Akihito FUJIWARA and Mayumi TAKAHASHI

being the inventor(s) of certain improvements in GAIN CONTROLLING APPARATUS AND METHOD, INFORMATION REPRODUCING APPARATUS AND METHOD, AND INFORMATION RECORDING APPARATUS AND METHOD

hereby assign unto

- (1) PIONEER CORPORATION
- (2) TOHOKU PIONEER CORPORATION

having a principal place of business at

- (1) No. 4-1 Meguro 1-chome, Meguro-ku, Tokyo-to, Japan
- (2) 1105, Aza-Nikko, Oaza-Kunomoto, Tendo-shi, Yamagata-ken, Japan

our entire right, title and interest in and to such invention, together with the patent rights and rights of protection to the same throughout the world, including any patent rights which may result from the application for United States Letters Patent in and to any and all divisions, reissues, continuations and extensions thereof and in and to any Letters Patent that may be granted thereon; said invention, application and Letters Patent that may be granted thereon; said invention, application and Letters Patent to be held and enjoyed by the said assignee for its own use and behoof and for the use and behoof of its successors and assigns, to the full end of the term from which said Letters patent or other rights of protection may be granted, as fully and as entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

WE COVENANT, AGREE AND WARRANT that we have a full and unencumbered title to the invention hereby assigned, and we further covenant and agree that we will, at any time upon request, without further compensation, execute and deliver any and all papers or instruments that in the opinion of the assignee may be necessary or desirable to secure said assignee the full enjoyment of the rights and properties herein conveyed or intended to be conveyed.

IN WITNESS WHEREOF, we have hereunto set out hand and seal this 12th day of November , 1999 .

Date: November 12, 1999
Masato Sakamoto

Date: November 12, 1999
Katsunori Tamamura

Date: November 12, 1999
Kazuhiko Oogami

Date: November 12, 1999
Norikazu Tada

Date: November 12, 1999
Atsushi Kusaka

Date: November 12, 1999
Akihito Fujiwara

Date November 12, 1999
Mayumi Takahashi